

**CLAIMS**

1 A drive mechanism for use in a drug delivery device comprising:  
a housing having an internal and an external thread;  
a piston rod having a non-circular cross section, and which is threadedly engaged  
with the internal thread of the housing;  
a unidirectional coupling located between the housing and the piston rod;  
a dose dial sleeve, which is threadedly engaged with the external thread of the  
housing and being rotatable with respect to the housing;  
a drive sleeve, located between the housing and the piston rod, which is axially  
displaceable but not rotatable with respect to the piston rod; and  
a clutch means located between the drive sleeve and the dose dial sleeve,  
which

- a) when the dose dial sleeve and the drive sleeve are de-coupled by the said  
clutch means, rotation of said dose dial sleeve with respect to the said  
drive sleeve is allowed; and
- b) when the dose dial sleeve and drive sleeve are coupled by the said clutch  
means, rotation of the dose dial sleeve with respect to the said drive  
sleeve is prevented.

2 An assembly for use in a drug delivery device comprising the drive  
mechanism as defined in claim 1.

3 A drug delivery device comprising the drive mechanism as defined in claim  
1 or the assembly of claim 2.

4 The drug delivery device according to claim 3, which is a pen-type device.

5 The drug delivery device according to any of claim 3 to 4, which is an  
injector-type device.

6 The drug delivery device according to any of claim 3 to 5, which comprises  
a needle.

7 The drug delivery device according to any of claim 3 to 5, which is a needle-free device.

8 The use of a drug delivery device as defined in any of claims 3 to 7 for dispensing a medicinal product.

9 The use of a drug delivery device according to claim 8 for dispensing a pharmaceutical formulation comprising an active compound selected from the group consisting of insulin, growth hormone, low molecular weight heparin, their analogues, and their derivatives.

10 The method of manufacturing or assembling a drug delivery device, comprising the step of providing a drive mechanism as defined in claim 1 or an assembly as defined in claim 2.